

ABSTRACT OF THE DISCLOSURE

A ring network provides transparent local area network (LAN) service by allocating respective proportions of data transmission capacity of the ring to different closed user groups (CUGs), each including a plurality of LAN clients. At each node of the ring, the use of a connected segment of the ring is monitored for both pass-through and locally-generated traffic by the LAN clients on a per-CUG basis. When it is detected that use of the connected segment for a CUG is approaching the allocated proportion, an active LAN client of the CUG is selected and sent a throttle message indicating that the LAN client is to reduce its data transmission rate. Rate monitoring for is accomplished using a "leaky bucket" mechanism. A "rate cache" identifying the active senders and their transmission rates can also be used in selecting a LAN client for receiving the throttle message.

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